

IN THE SPECIFICATION

Please amend the last paragraph of the Summary, which begins on page 5, line 21, as follows:

Accordingly, since the actual tuned-to frequency  $F'_1$  is used to determine the offset amount  $\Delta F$ , and  $\Delta F$  is added to the actual tuned-to frequency  $F'_1$ , the truncation error for the new tuned-to frequency is only  $\frac{1}{2}$  LSB rather than 1 LSB, as is the case when the ranging offset is applied to the currently commanded frequency  $F_1$  rather than the frequency actually tuned to  $F'_1$ . This method may also be applied to other two-way communication systems and devices, such as, for example, wireless devices such as cellular ~~ellular~~ telephones and PDA's.

Please amend the following two paragraphs of the specification, the first paragraph on page 7 and the first full paragraph on page 10, respectively thereof, as highlighted below. In the amended paragraphs below, strikethroughs indicate deletions and underlining indicates additions.

Turning now to the figures, FIG 1 illustrates a flow chart for a method 100 for increasing the accuracy of applying a ranging offset frequency used to command a communication to device to tune from a currently tuned frequency to a new frequency. The method begins at step 102 when the device, a modem being in the preferred embodiment, although other embodiments include devices such as, for example, a wireless PDA or cellular phone, boots up. As the modem performs its boot up steps, it ranges – is performing its ranging operation, ranging being known in the art, with another device being communicated with. This other device may be a cable modem termination system ("CMTS") known in the art, for example. The CMTS determines whether the modem is currently tuned to an upstream frequency at step 104. If not, process 100 proceeds to step 106, where the CMTS determines the desired frequency for the modem or other device to tune. The desired frequency,  $F_1$  is sent in a message to the modem, the messaging and protocol used therefore being known in the art. At step 108, this desired frequency message is digitized into a tuning frequency word  $F'_1$ .

It will be appreciate appreciated that in the foregoing description,  $\delta$  is referred to as an absolute bounding value, but  $\delta$  may be either positive or negative, depending on whether the desired frequency is lower or high, respectively, than the nearest whole number multiple of 10.43081 Hz.

Please add the following paragraph immediately before the last paragraph of the as-filed application. This paragraph states in the Detailed Description features that are claimed by originally filed claims 5 - 6, 11 - 12, and 17 - 18, and does not contain new matter.

In an alternative embodiment, method 100 may include storing the truncation, or quantization, error. The stored truncation, or quantization, error can then be used to facilitate generating a frequency offset message if the frequency offset word derived therefrom is to be applied to the currently commanded frequency instead of the actual frequency. For example, if the desired  $\Delta F = x$ , then the stored truncation error could be subtracted from  $\Delta F$  so that the  $\Delta F$  applied to the last-commanded F would be  $\Delta F_{app} = x - \delta_1$  if  $\Delta F$  is a positive value (instruction to raise frequency from current desired frequency). Conversely, the stored truncation error could be added to  $\Delta F$  so that the  $\Delta F$  applied to the last-commanded F would be  $\Delta F_{app} = x + \delta_1$  if  $\Delta F$  is a negative value ( $\Delta F$  is an instruction to lower frequency from current desired frequency).